

## REMARKS

Claims 1-23 are pending in this application, with claims 15 to 23 being withdrawn from consideration. Claim 24 is new, support for which can be found in the claims as filed. Claim 25 is new, support for which can be found at page 5, lines 13 to 17. By this Amendment, claim 1 has been amended to recite that the initial portion of the duct is oriented in a direction substantially tangential to the circumference of the rotor. Claim 5 has been amended to provide proper antecedent basis for the term "inert and immiscible liquid." Entry and consideration of these amendments is earnestly requested in that it does not introduce new matter.

Independent consideration of new claims 24 and 25 is respectfully requested.

### *Claim Rejections*

#### Rejections under §35 U.S.C. 112

- A. Response to rejection of claim 5 under 35 U.S.C. §112, second paragraph as being indefinite.

In response to the rejection of claim 5 under 35 U.S.C. §112, second paragraph as being indefinite, Applicants have amended claim 5 to provide antecedent basis. Reconsideration and withdrawal of the Rejection respectfully is requested.

#### Rejections under §35 U.S.C. 103

- B. Response to rejection of claims 1-5, and 7-14 under 35 U.S.C. §103(a) as being unpatentable over Arletti et al. in view of Hetherington and Povey et al.

In response to the Rejection of claims 1-5, and 7-14 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent Publication No. U.S. 2003/0096699 of Arletti et al. ("Arletti") in view of U.S. Patent No. U.S. Patent No. 2,461,276 of Hetherington ("Hetherington") and U.S. Patent No. 1,489,786 of Povey et al. ("Povey"), Applicants submit that a *prima facie* case of Obviousness has not been made out and traverse the Rejection.

With respect to a rejection under 103(a), the U.S. Supreme Court in *Graham v. John Deere Co.*, 148 U.S.P.Q. 459 (1966) held that non-obviousness was determined under §103 by (1) determining the scope and content of the prior art; (2) ascertaining the differences between the prior art and the claims at issue; (3) resolving the level of ordinary skill in the art; and, (4)

inquiring as to any objective evidence of non-obviousness. Accordingly, for the Examiner to establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. See MPEP §2143. Finally, all claim limitations must be taught or suggested by the prior art. *In re Royka*, 490 F.2d 981, 180 U.S.P.Q. (BNA) 580 (C.C.P.A. 1974).

Arletti do not teach, suggest or disclose the current claims. First, Arletti's process is not a multistage process for the continuous production of an emulsion, the process comprising subjecting at least two immiscible liquids to a sequence of at least two mixing stages carried out in at least two successive stator-rotor devices each comprising at least one rotor disk and one stator. At most, Arletti teach a first step consisting of a single emulsion-forming step and a second cooling/solidification step where droplets of Mg dihalide are solidified (paragraphs [0016] to [0018]). The cooling/solidification is important to obtaining particles with the appropriate morphology and size distribution. (paragraph [0015]) Moreover, contrary to the Examiner's contention, vessel 1 and cooling bath 15 are not rotor-stator devices at all. Vessel 1 is simply a stirred tank. The fact that vessel 1 contains a stirrer 4 does not make it a rotor-stator device as in the recited claims. Vessel 1 has no stator at all, and in any event, does not contain a rotor-stator as in the present claims. Cooling bath 15 is simply a stirred tank with a draft tube. The fact that it has a stirrer 16 does not make it a rotor-stator as in the recited claims. Moreover, cooling bath 15's turbulent zone 20 does not constitute a stator as part of a rotor-stator device as in the present claims. The Examiner has pointed to paragraph [0035] as allegedly being proof of Arletti teaching of a rotor-stator device, however, Arletti's discussion of a rotor-stator device is completely generic, and in any event, refers only to step (a) in vessel 1, not vessel 15.

Second, Arletti do not disclose a peripheral outlet from a first stator-rotor device connected to an axial inlet in a successive stator-rotor device. Even assuming that turbulent zone 20 constitutes a stator as part of a rotor-stator device as claimed, which it does not, Arletti do not teach introducing the emulsion into an axial inlet. Introduction is clearly shown at a midpoint of the turbulent zone 20.

Third, Arletti do not disclose an initial portion of a duct being oriented in a direction substantially tangential to the circumference of the rotor. As discussed above, vessel 1 does not

disclose a stator at all, much less a rotor-stator device. Further, pipe 14 does not convey the emulsion to a rotor-stator device, but to a cooling bath performing a cooling/solidification step. Finally, Arletti do not teach, suggest or disclose that the duct is oriented in a direction substantially tangential to the circumference of the rotor.

Hetherington and Povey do not cure the deficiencies of Arletti. Hetherington relates to a continuous process of manufacturing lubricating greases. Povey relates to a machine for disintegrating solid material in the presence of a liquid and for the emulsification or admixture of liquids. Neither Hetherington nor Povey teach, suggest or disclose an initial portion of the duct being oriented in a direction substantially tangential to the circumference of the rotor. In fact, Povey teaches away from combination with Arletti since it discloses a device that disintegrates solid materials (page 2, right column, lines 103-110), while Arletti is specifically designed to solidify materials out of solution in a carefully designed way so as to affect the solids morphology and particle size distribution. Therefore, a *prima facie* case of Obviousness has not been made out.

Reconsideration and withdrawal of the Rejection respectfully is requested.

C. Response to rejection of claims 1-5, and 7-14 under 35 U.S.C. §103(a) as being unpatentable over Povey in view of Arletti.

In response to the Rejection of claims 1-5, and 7-14 under 35 U.S.C. §103(a) as being unpatentable over Arletti in view of Povey, Applicants submit that a *prima facie* case of Obviousness has not been made out and traverse the Rejection.

The threshold requirements of a Rejection under §103 have been described in paragraph B above. Arletti and Povey have also been discussed in Paragraph B above, and the discussion of each of the references from that paragraph are fully incorporated in the response to this Rejection.

Neither Povey nor Arletti teach, suggest or disclose an initial portion of the duct being oriented in a direction substantially tangential to the circumference of the rotor. In fact, Povey teaches away from combination with Arletti since it discloses a device that disintegrates solid materials (page 2, right column, lines 103-110), while Arletti is specifically designed to solidify materials out of solution in a carefully designed way so as to affect the solids morphology and particle size distribution. Therefore, a *prima facie* case of Obviousness has not been made out.

Reconsideration and withdrawal of the Rejection respectfully is requested.

D. Response to rejection of claims 1-5, and 7-14 under 35 U.S.C. §103(a) as being unpatentable over Ferraris in view of Hetherington and Povey.

In response to the Rejection of claims 1-5, and 7-14 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 4,469,648 of Ferraris et al. ("Ferraris") in view of Hetherington and Povey, Applicants submit that a *prima facie* case of Obviousness has not been made out and traverse the Rejection.

The threshold requirements of a Rejection under §103 have been described in paragraph B above. Hetherington and Povey have also been discussed in Paragraph B above, and the discussion of each of the references from that paragraph are fully incorporated in the response to this Rejection.

Ferraris do not teach, suggest or disclose the current claims. First, Ferraris's process is not a multistage process for the continuous production of an emulsion, the process comprising subjecting at least two immiscible liquids to a sequence of at least two mixing stages carried out in at least two successive stator-rotor devices each comprising at least one rotor disk and one stator. At most, Ferraris teach a first step consisting of a single emulsion-forming step and a second cooling/solidification step where droplets of molten material are solidified (col. 1, lines 49-54, and col. 2, lines 16-18). The cooling/solidification is important to obtaining particles with a narrow particle size distribution. (col. 2, lines 67-68). Moreover, contrary to the Examiner's contention, heating sleeve 20 and cooling chamber 40 are not rotor-stator devices at all. The Examiner presumably meant to refer to vessels 10 and 36. However, vessel 10 is simply a jacketed stirred tank. The fact that vessel 10 contains a stirrer 16 does not make it a rotor stator device as in the recited claims. Vessel 10 has no stator at all, and in any event, does not contain a rotor-stator as in the present claims. Vessel 36 is also simply a stirred tank. The fact that it has a stirrer 38 does not make it a rotor-stator as in the recited claims. Vessel 36 contains no stator at all, and in any event, does not contain a rotor-stator as in the present claims. Moreover, emulsification does not take place in vessel 36. Solidification of the molten particles take place in vessel 36.

Second, Ferraris do not disclose an initial portion of a duct being oriented in a direction substantially tangential to the circumference of the rotor. As discussed above, neither vessel 10 or 36 disclose a stator at all, much less a rotor-stator device as in the present claims. Further, pipe 30 and 30A do not convey the emulsion to a successive rotor-stator device, but to a cooling/solidification step. Finally, Ferraris do not teach, suggest or disclose that the duct is oriented in a direction substantially tangential to the circumference of the rotor.

Hetherington and Povey do not cure the deficiencies of Ferraris. Hetherington relates to a continuous process of manufacturing lubricating greases. Povey relates to a machine for disintegrating solid material in the presence of a liquid and for the emulsification or admixture of liquids. Neither Hetherington nor Povey teach, suggest or disclose an initial portion of the duct being oriented in a direction substantially tangential to the circumference of the rotor. In fact, Povey teaches away from combination with Ferraris since it discloses a device that disintegrates solid materials (page 2, right column, lines 103-110), while Ferraris is specifically designed to solidify materials out of solution in a carefully designed way so as to affect the solids particle size distribution. Therefore, a *prima facie* case of Obviousness has not been made out.

Reconsideration and withdrawal of the Rejection respectfully is requested.

E. Response to rejection of claims 1-5, and 7-14 under 35 U.S.C. §103(a) as being unpatentable over Povey in view of Ferraris.

In response to the provisional Rejection of claims 1-5, and 7-14 under 35 U.S.C. §103(a) as being unpatentable over Povey in view of Ferraris, Applicants submit that a *prima facie* case of Obviousness has not been made out and traverse the Rejection.

The threshold requirements of a Rejection under §103 have been described in paragraph B above. Povey has also been discussed in Paragraph B above, and the discussion of that paragraph is fully incorporated in the response to this Rejection.

Neither Povey nor Ferraris teach, suggest or disclose an initial portion of the duct being oriented in a direction substantially tangential to the circumference of the rotor. In fact, Povey teaches away from combination with Ferraris since it discloses a device that disintegrates solid materials (page 2, right column, lines 103-110), while Ferraris is specifically designed to solidify

materials out of solution in a carefully designed way so as to affect the solids particle size distribution. Therefore, a *prima facie* case of Obviousness has not been made out.

Reconsideration and withdrawal of the Rejection respectfully is requested.

F. Response to rejection of claim 6 under 35 U.S.C. §103(a) as being unpatentable over Arletti in view of Hetherington, Povey and Konig et al.

In response to the Rejection of claim 6 under 35 U.S.C. §103(a) as being unpatentable over Arletti in view of Hetherington, Povey and U.S. Patent No. 4,089,835 of Konig et al. (“Konig”), Applicants submit that a *prima facie* case of Obviousness has not been made out and traverse the Rejection.

The threshold requirements of a Rejection under §103 have been described in paragraph B above. Arletti, Hetherington and Povey have also been discussed in Paragraph B above, and the discussion of each of the references from that paragraph are fully incorporated in the response to this Rejection.

Neither Arletti, Hetherington or Povey teach, suggest or disclose an initial portion of the duct being oriented in a direction substantially tangential to the circumference of the rotor. In fact, Povey teaches away from combination with Arletti since it discloses a device that disintegrates solid materials (page 2, right column, lines 103-110), while Arletti is specifically designed to solidify materials out of solution in a carefully designed way so as to affect the solids morphology and particle size distribution.

Konig does not cure the deficiencies of Arletti, Hetherington and Povey. Konig’s discussion of flow mixers is completely generic, and does not suggest or disclose an initial portion of the duct being oriented in a direction substantially tangential to the circumference of the rotor. Therefore, a *prima facie* case of Obviousness has not been made out.

Reconsideration and withdrawal of the Rejection respectfully is requested.

G. Response to rejection of claim 6 under 35 U.S.C. §103(a) as being unpatentable over Povey in view of Arletti and Konig.

In response to the provisional Rejection of claim 6 under 35 U.S.C. §103(a) as being unpatentable over Povey in view of Arletti and Konig, Applicants submit that a *prima facie* case of Obviousness has not been made out and traverse the Rejection.

The threshold requirements of a Rejection under §103 have been described in paragraph B above. Arletti and Povey have also been discussed in Paragraph B above. Konig has been discussed in Paragraph F above, and the discussion of each of the references from those paragraphs are fully incorporated in the response to this Rejection.

Neither Povey, Arletti, or Konig teach, suggest or disclose an initial portion of the duct being oriented in a direction substantially tangential to the circumference of the rotor. In fact, Povey teaches away from combination with Arletti since it discloses a device that disintegrates solid materials (page 2, right column, lines 103-110), while Arletti is specifically designed to solidify materials out of solution in a carefully designed way so as to affect the solids morphology and particle size distribution. Therefore, a *prima facie* case of Obviousness has not been made out.

Reconsideration and withdrawal of the Rejection respectfully is requested.

H. Response to rejection of claim 6 under 35 U.S.C. §103(a) as being unpatentable over Ferraris in view of Hetherington, Povey and Konig.

In response to the provisional Rejection of claim 6 under 35 U.S.C. §103(a) as being unpatentable over Ferraris in view of Hetherington, Povey and Konig, Applicants submit that a *prima facie* case of Obviousness has not been made out and traverse the Rejection.

The threshold requirements of a Rejection under §103 have been described in paragraph B above. Ferraris has been discussed in Paragraph D above. Hetherington and Povey have been discussed in Paragraph B above. Konig has been discussed in Paragraph F above. The discussion of each of the references from that paragraph are fully incorporated in the response to this Rejection.

Neither Ferraris, Hetherington, Povey or Konig teach, suggest or disclose an initial portion of the duct being oriented in a direction substantially tangential to the circumference of the rotor. In fact, Povey teaches away from combination with Arletti since it discloses a device that disintegrates solid materials (page 2, right column, lines 103-110), while Arletti is specifically designed to solidify materials out of solution in a carefully designed way so as to affect the solids morphology and particle size distribution. Therefore, a *prima facie* case of Obviousness has not been made out.

Reconsideration and withdrawal of the Rejection respectfully is requested.

I. Response to rejection of claim 6 under 35 U.S.C. §103(a) as being unpatentable over Povey in view of Ferraris and Konig.

In response to the provisional Rejection of claim 6 under 35 U.S.C. §103(a) as being unpatentable over Povey in view of Ferraris and Konig, Applicants submit that a *prima facie* case of Obviousness has not been made out and traverse the Rejection.

The threshold requirements of a Rejection under §103 have been described in paragraph B above. Povey has also been discussed in Paragraph B above. Ferraris has been discussed in Paragraph D above. Konig has been discussed in Paragraph F above. The discussion of each of the references from that paragraph are fully incorporated in the response to this Rejection.

Neither Povey, Ferraris or Konig teach, suggest or disclose an initial portion of the duct being oriented in a direction substantially tangential to the circumference of the rotor. Therefore, a *prima facie* case of Obviousness has not been made out.

Reconsideration and withdrawal of the Rejection respectfully is requested.

Applicant respectfully requests that a timely Notice of Allowance be issued in this case. Should the Examiner have questions or comments regarding this application or this Amendment, Applicant's attorney would welcome the opportunity to discuss the case with the Examiner.



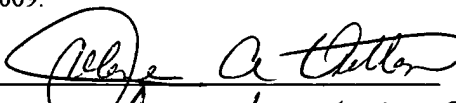
The Commissioner is hereby authorized to charge U.S. PTO Deposit Account 08-2336 in the amount of any fee required for consideration of this Amendment.

Respectfully submitted,



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I hereby certify that this correspondence is being deposited with sufficient postage thereon with the United States Postal Service as first class mail in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on August 26, 2009.

  
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